



November 5, 2021

Ms. Shalanda D. Young  
Acting Director  
Office of Management and Budget

Dr. Eric S. Lander  
Director  
Office of Science and Technology Policy

Dear Ms. Young and Dr. Lander,

The Coalition for National Science Funding (CNSF) appreciates the opportunity to submit policy recommendations in response to the Biden Administration's FY 2023 multi-agency R&D priorities to the Office of Management and Budget (OMB) and the Office of Science and Technology Policy (OSTP).

CNSF is an alliance of more than 130 professional organizations, scientific societies, universities, and businesses united in our advocacy for the National Science Foundation (NSF). CNSF supports the goal of increasing the national investment in NSF's research and educational programs in response to the scientific, technological, and economic challenges facing the United States. NSF plays a critical role in advancing our nation's competitiveness and addressing research and education challenges related to many Biden Administration priorities. We hope that you will use the FY 2023 budget request to propose growth to NSF that enables progress on these priorities, as well as steady expansion to the agency's core activities that form the backbone of the U.S. science and technology innovation ecosystem.

**Pandemic readiness and prevention**

The COVID-19 pandemic has touched every sector of the economy and requires research across disciplines to tackle the numerous societal, medical, public health, forecasting, logistics, education, and manufacturing challenges facing our nation. NSF funding has helped to advance the development of early warning systems, diagnostics, tools for virtual learning, and public health innovations. In addition, NSF has addressed the challenges facing the academic and research communities that have been disrupted through the pandemic, supporting the next generation of scientists and engineers. Now is the time to set a trajectory that will put the nation back on a path that ensures not only economic recovery from the pandemic, but also builds a capable workforce, and develops the science and technologies necessary to best prepare our nation for future pandemics and other natural disasters. NSF is leading the way through programs such as Predictive Intelligence for Pandemic Prevention. ***NSF's sustained***

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***funding for pandemic preparedness will ensure that we continue to bring engineering, social, behavioral, ecological, computing, and other approaches to this enormous challenge. NSF should also continue to rebuild the research enterprise for recovery from pandemic-related losses, especially focusing on those most at risk in the scientific community and our next generation of scientists.***

### **Tackling climate change and spurring energy innovation**

Climate change is one of the most challenging and complex issues facing our nation and the world, requiring deep understanding of multifaceted and interdependent biological, geological, social, and behavioral systems, equity, and urgent technological innovation to enhance our resilience. NSF has been instrumental across these fields, advancing our foundational understanding of climate change, challenges facing specific regions and communities such as the Arctic and coasts, training the climate and energy workforce of the future, and developing innovations in environmental engineering, energy, and resilience. There is enormous opportunity for NSF to grow its convergent research, innovation, and partnership activities to address climate change. ***The Administration should enable NSF to play a key role in national climate and energy initiatives. Additional funding for NSF is necessary to truly meet the challenge ahead while at the same time ensuring that we do not jeopardize the foundational science and engineering ecosystem that will be critical for our future competitiveness and resilience.***

### **Catalyze research and innovation in critical and emerging technologies**

Funding for research and innovation in several areas, including artificial intelligence, quantum information science and high-performance computing, among others, is critical for maintaining our nation's global competitiveness. NSF support is essential for expanding these technologies, for training a diverse workforce of future innovators, and for developing new research ideas. Fundamental research supported by the NSF often lays the groundwork for developing new technologies. ***CNSF encourages the Administration to support NSF-funded technological innovations that ensure our nation's global competitiveness, in addition to fundamental research which drives our nation forward in science and technology.***

### **STEM education, engagement, and innovation for equity**

Equity and access to federal funding opportunities and programs are critical for our nation's prosperity and can only be achieved through increasing capacity building and expanding participation in training programs. NSF supports implementing programs to promote excellence in STEM education at all levels and in all settings, as well as research aimed at developing and identifying successful education and training models. These investments, in turn, help STEM educators reach the "missing millions" and support a diverse and well-prepared workforce. Talent development for those underserved and underrepresented in STEM through equitable

education and training can greatly strengthen our nation's workforce. ***CNSF encourages the Administration to invest in NSF-funded workforce, education, and education research activities, to develop a diverse and inclusive STEM workforce.***

**National security and economic resilience**

Investments in research and technology underpin our resilience and national security. NSF partners with the Department of Defense in many areas to ensure that foundational advances in science and engineering address national security challenges, and to establish and maintain the development of a diverse future workforce that will underpin our economic competitiveness and national security enterprise. For example, NSF funds efforts to understand social and behavioral systems that improve decision making, training, and collaboration. NSF also supports research that enhances cybersecurity and protects against online threats that have been exacerbated during the pandemic. Research collaborations with international partners help maintain an open and engaging research environment and drive progress in science and technology. ***CNSF encourages the Administration to support NSF research and technological innovations, including social and behavioral research, to ensure our national security while maintaining a collaborative global research environment.***

We look forward to working with you to support NSF funding in FY 2023. If CNSF can be a resource for you in this endeavor, please don't hesitate to contact us.

Sincerely,

The Coalition for National Science Funding

American Anthropological Association  
American Association for the Advancement of  
Science  
American Association of Geographers  
American Association of Physicists in Medicine  
(AAPM)  
American Association of Physics Teachers  
American Astronomical Society  
American Chemical Society  
American Crystallographic Association  
American Educational Research Association  
American Geophysical Union  
American Institute of Biological Sciences  
American Institute for Medical and Biological  
Engineering (AIMBE)  
American Mathematical Society  
American Physical Society  
American Physiological Society  
American Political Science Association  
American Psychological Association  
American Society of Agronomy  
American Society of Civil Engineers  
American Society for Engineering Education  
American Society of Mechanical Engineers  
American Society for Microbiology  
American Society for Pharmacology and  
Experimental Therapeutics  
American Society of Plant Biologists  
American Sociological Association  
American Statistical Association  
Arizona State University  
Association for Psychological Science  
Association for Women in Mathematics  
Association of American Medical Colleges  
Association of American Universities  
Association of Public and Land-grant Universities  
Association of Science and Technology Centers  
(ASTC)  
Atlanta University Center Consortium  
Battelle  
Biophysical Society  
Boise State University  
Boston University  
Brandeis University  
Brown University

Caltech  
Cavarocchi Ruscio Dennis Associates  
Coalition for Academic Scientific Computation  
Columbia University  
Computing Research Association  
Consortium of Social Science Associations  
Cornell University  
Council of Graduate Schools  
Council of Scientific Society Presidents  
Council on Undergraduate Research  
Crop Science Society of America  
Dartmouth College  
Duke University  
Ecological Society of America  
Entomological Society of America  
Eversole Associates  
Federal Science Partners  
Federation of Associations in Behavioral & Brain  
Sciences  
Federation of American Societies for Experimental  
Biology  
Florida State University  
Forge Policy Solutions  
Geological Society of America  
George Mason University  
Georgia Institute of Technology  
Harvard University  
IEEE-USA  
Incorporated Research Institutions for Seismology  
(IRIS)  
Indiana University  
Lehigh University  
Lewis-Burke Associates LLC  
Linguistic Society of America  
Massachusetts Institute of Technology  
Mathematical Association of America  
Materials Research Society  
Michigan State University  
Michigan Technological University  
Mineralogical Society of America  
Museum of Science, Boston  
National Association of Marine Laboratories  
National Communication Association  
National Postdoctoral Association  
Natural Science Collections Alliance

New York University  
Northeastern University  
Northern Illinois University  
Optica (formerly OSA), Advancing Optics and  
Photonics Worldwide  
Pennsylvania State University  
Population Association of America  
Princeton University  
PsySiP: Psychology of Science in Policy  
Research!America  
Rutgers, The State University of New Jersey  
SACNAS  
SAGE Publishing  
Saint Louis University  
Silicon Valley Leadership Group  
Society for American Archaeology  
Society for Industrial and Applied  
Mathematics  
Society for Industrial and Organizational Psychology  
Society for Neuroscience  
Society for Research in Child Development  
Society for the Psychological Study of Social Issues  
(SPSSI)  
Soil Science Society of America  
SPIE  
Stevens Institute of Technology  
Stony Brook University

The Bagley Group  
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